

Modernization of Die-Forging Equipment

SOV/5658

on Problems in the Modernization and Operation of Die-Forging Equipment, held in November 1958 in Leningrad. The Conference was called by Leningradskiy Sovet narodnogo khozyaystva, Sektsiya obrabotki metallov davleniyem Leningradskogo oblastnogo pravleniya NTO Mashprom (Leningrad Council of the National Economy, Section of Metal Pressworking at the Leningrad Oblast Board of the Scientific and Technical Society of the Machine Industry) and Leningradskiy mekhanicheskii institut (Leningrad Mechanical Engineering Institute). Actual problems in the modernization, operation, and repair of die-forging equipment are described. Analyses are provided for problems involved in the mechanization and automation of die-forging and stamping operations. Also included are practical data to be used in the modernization of equipment. No personalities are mentioned. There are 59 references: 56 Soviet, 2 German, and 1 English.

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that exchange acidity is due to replaceable H⁺ ions and the
views of Chernov (C.A. 47, 6590c; C. et al., C.A. 49,
14242c) that exchange Al is responsible for the acidity.
Conclusion: There is no proof that Al is the chief source of
hydrolytic acidity and hence of exchange acidity.
— I. S. Joffe

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Specific pickup of glassmelt as a function of the charge composition. G. M. ASHKINARI AND L. G. GOL'DENBERG. <i>Steklo i Keram.</i>, 5 (10) 3-7 (1948). -- Production data of window-glass plants for a 4 1/2-year period were studied. The plants used charges of 100 sulfate, 10 to 30 soda, 40 to 100 soda, and 70 to 100% soda. A nomograph was constructed showing specific pickup as a function of charge composition and melting temperature. Calculations were based on a charge containing fluorspar admixture and fed in batch piles. For a charge without fluorspar, the pickup values are multiplied by 0.9; for thin layer charging, the pickup values are multiplied by 1.12. The nomograph makes it possible to analyze tank operations with an accuracy sufficient for practical purposes. B Z K																			
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Electric heating of glass in the Fourcault channel. G. M. ASHKINAZI, B. V. ZHUKOVSKI, AND M. G. SIRPANENKO. <i>Shtro i Keram.</i>, 6 [3] 3-9 (1949).--Electric heating was undertaken to combat streaks and devitrification. The electrodes (3-in. steel tubes) were immersed to a depth of 20 cm. It was possible to attain complete isothermy of the melt under the debiteuse, with a total rise in temperature in this zone of 30°. Temperature distribution along the depth of the melt in the preheating chamber was considerably improved. Temperature difference between the surface and a depth of 65 cm. was reduced from 100° (original temperature) to 110°C. Equalization of temperature was caused by a 15° to 20° drop in the upper levels and a 30° to 40° rise at a depth of 30 to 55 cm. At a depth of 65 cm., the temperature rose from 900° to 1000°, thus eliminating the possibility of crystallization. Devitrification was completely eliminated, and streaks were considerably reduced. Temperature curves and a schematic diagram of the electrical system are given. B.Z.K.																																																																																																																																																																																																																																																																																																																							
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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
ASHKINAZI, G. M. Electric heating of glassmelt in the machine canal at the Proletarii Glassworks. G. M. ASHKINAZI, A. D. VOL'PMAN, AND L. V. CHERREVAENKO. <i>Steklo i Keram.</i>, 6 [9] 6-10 (1949).— Electric heating of the canal increases pickup and improves the quality of sheet glass. The determining factors of good electric heating are a proper system of feeding the current and correct amperage and voltage. At the Proletarii Glassworks both single- and three-phase supplies were used; for the latter, 3 single-phase transformers were joined. Current density was measured by a specially designed densimeter consisting of a rod and two 10 x 20 mm heat resistant steel plates positioned parallel to each other at a distance of 10 to 12 mm and connected by insulated and water cooled leads to a millivoltmeter. Measurements were made to a depth of 75 cm, near the left side, near the right side, and in the middle. A Pt-Pt-Rh couple was similarly immersed. Single phase study was limited to machine No. 6; three-phase study included machines Nos. 5, 6, and 7. The most advantageous distribution of the electrodes is in the preheating chambers. For single phase supply, the temperature gradient at a depth of 0.15 to 0.20 m. was 5° (I = 180 amp.) and 7° (I = 140 amp.), and the temperature at 0.75 m. was 983°C (I = 180 amp.) and 925° (I = 140 amp.). Without electric heating, the gradient near the surface was 25° and the temperature at 0.75 m. was 901° to 910°C. A completely isothermal melt was obtained at a depth of 0.30 to 0.35 m. Distribution of current density and temperature along the depth were identical. For the three-phase supply, current distribution and temperatures in all three machines were not investigated. The melt was less isothermal than for the single phase current, but it was possible to equalize the temperature along the whole width of the canal. Thermal efficiency, combined with gas heating of the furnace, was only 70 to 72%. W. Z. K.																			
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KASHKIN, G. M.

PROCESSES AND PROPERTIES INDEX

Improving the optics of sheet glass by electric heating of the melt. M. G. STEPANENKO, G. M. ASHKINAZI, AND L. V. CHERNYATENKO. *Steklo i Keram.* 7 [2] 3-6 (1950) Electric heating of the melt for one month at the Proletarii glassworks resulted in a reduction of streaks and devitrification. The optimum conditions are 55 to 65 v. at the electrodes and a current strength of 140 to 180 amp. The electric heating lowered the temperature gradient in the melt along the width and depth of the canal from 20° to 2-3°, and the temperature in the depth of the melt in the working canal rose 35° to 40°. The most advantageous distribution of the electrodes is directly before the bridgewall in the working chambers for both direct and consecutive feeding of the melt. The heads of the electrodes, 100 mm. in diameter, are immersed to a depth of 300 to 350 mm. from the surface and 200 mm. from the inner wall of the canal. The consumption of electric energy is about 10 kw.-hr. per 100 sq. m. of glass. Temperature curves with and without electric heating are given. Cf. *Ceram. Abstracts*, 1950, July, p. 1406. B. Z. K.

ASR-51A METALLURGICAL LITERATURE CLASSIFICATION

130001 574.02190

130000 574.02190

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ASHKINAZI, I. G.

70T88

PA

USSR/Medicine - Hygiene and Sanitation, May 1948

Medicine - Venereal Disease
Military

"Study of the Medical and Sanitation Consequences of
the War and Their Countermeasures," I. G. Ashkinazi,
5 pp

"Gig 1 San" Vol XIII, No 5

Fourth conference on the above matter was held, 23-26
Dec 1947, by the Commission of the Presidium and the
Institute of Public Health and Medical History, Acad
Sci USSR. Gives brief summary of the speech of each
delegate. Among diseases mentioned: typhus, malaria,
venereal disease, and tuberculosis. Reports were read

USSR/Medicine - Hygiene and Sanitation, May 1948

Military (Comm) May 1948

on conditions prevailing in various war-scarred re-
gions, e.g., Moldova, Karelia, Leningrad, and
Ukraine SSR.

70T88

ASHKINAZI, I.M.; GOLEMBO, V.A.; POMPEYEV, V.M.

Semiconductor voltage stabilizers for measuring networks.
Avtom. kont. i elek. izm. no.2:83-96 '60. (MIRA 15:3)
(Voltage regulators) (Electric measurements)

ASHKINAZI, I.Ya.

Hypersplenism; a discussion of the article by M.M. Tushinskaya and I.U.P. Urinson, "The influence of the spleen on hematopoiesis." Probl.gemat.i perel.krovi no.9:23-27 '62. (MIRA 15:12)

1. Iz 2-y terapevticheskoy kliniki (zav. - dotsent G.A. Gol'dberg) Novokuznetskogo gosudarstvennogo instituta dlya usovershenstvovaniya vrachey.

(HYPERSPLENISM) (HEMOPOIETIC SYSTEM) (SPLEEN—DISEASES)

(TUSHINSKAYA, M.M.) (URINSON, I.U.P.)

ASHKINAZI, I. Ya.

Cand Med Sci - (diss) "Role of the spleen in changes in the composition of blood in splenomegalic cirrhosis of the liver. (Clinico-experimental studies)." Leningrad, 1961. 20 pp; (Leningrad Pediatrics Med Inst); 250 copies; price not given; (KL, 6-61sup, 236)

ASHKINAZI, I.Ya. (Leningrad)

Influence of the operation of portacaval anastomosis on some
hematopoietic indices in patients with liver cirrhosis. Terap.
arkh. 33 no.11:39-45 '61. (MIRA 15:5)

1. Iz kliniki propedevtiki vnutrennikh bolezney (zav. - deystvitel'-
nyy chlen AMN SSSR prof. M.D. Tushinskiy) I Leningradskogo meditsin-
skogo instituta imeni akad. I.P. Pavlova.

(LIVER—CIRRHOSIS) (PORTACAVAL ANASTOMOSIS)
(HEMOPOIETIC SYSTEM)

ASHKINAZI, I.Ya.

Change in hemopoiesis in congestive splenomegaly with and without denervation of the spleen. Biul.eksp. biol. i med. 49 no.2:46-50 F '60. (MIRA 14:5)

1. Iz kliniki propedevtiki vnutrennikh bolezney (zav. - deystvitel'nyy chlen AMN SSSR M.D. Tushinskiy) i kafedry patologicheskoy fiziologii (zav. - prof. M.M.Pavlova) i Leningradskogo meditsinskogo instituta imeni I.P.Pavlova. Predstavlena deystvitel'nyy chlenom AMN SSSR M.D. Tushinskim.

(SPLEEN--DISEASES)

(HEMOPOIETIC SYSTEM)

S/048/63/027/001/036/043
B125/B102

AUTHORS: Guseva, A. N., Ashkinadze, L. D., and Leyfman, I. Ye.
TITLE: Characterization of solid petroleum paraffins on the basis
of the infrared absorption spectra in the region 700 cm^{-1}
PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27,
no. 1, 1963, 104 - 107

TEXT: A study is made of the spectra of more than 80 fractions of petroleum paraffins (part of them forming carbamide complexes) in order to characterize the solid petroleum paraffins having different chemical structures on the basis of their absorption characteristics between 700 and 750 cm^{-1} . The fractions of the complex-forming hydrocarbons were produced by fractionating paraffins with carbamide and from 50° -distillate fractions of mineral oils. The residues of the solid hydrocarbons not reacting with carbamide, were fractionated by chromatography on charcoal. The deviations of the properties of the fractions from those of the n-paraffins are characterized by the sum factor $\phi_c = 2 \cdot (10^{3n_D^{90} - 1400}) - 0.84t_{\text{sol}}$ where n_D^{90}

Card 1/2

Characterization of solid ...

S/048/63/027/001/036/043
B125/B102

denotes the refractive index and t_{sol} is the solidification temperature. The fractions separated at $t_{sol} = 19.5$ to 68.2°C are mainly n-paraffins with possible admixtures of iso and cycloparaffins. The hydrocarbons forming no complexes differ more strongly from the n-paraffins. The paraffin fractions not forming complexes contain a large number of methyl groups. In the range from 700 to 750 cm^{-1} the character of the absorption bands depends on t_{sol} . Probably the changes in the spectra of the petroleum paraffins are connected with the formation of crystal structures. There are 2 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

Card 2/2

ASHKINAZI, L.I.

Cholinergic effect in diseases of the hematopoietic system. Klin.
med., Moskva 29 no.3:85-86 Mar 51. (CLML 20:7)

1. Of the Electro-Biophysics Laboratory (Head—Prof. M.E. Kersanov)
and of the Therapeutic Clinic (Head—Prof. S.I. Sherman), Leningrad
Order of the Red Banner of Labor Institute of Blood Transfusion,
Leningrad. *50/100*

ASHKINAZI, L.I., nauchnyy sotrudnik; RAPAL'SON, D.I., kand.med.nauk

Influence of blood giving on the nervous and cardiovascular systems
of donors with hypotension. Akt.vop.perel.krovi no.4:18-21 '55.

(MIRA 13:1)

1. Donorskiy otdel Leningradskogo instituta perelivaniya krovi (nauch-
nyy rukovoditel' raboty - prof. S.I. Sherman).

(BLOOD DONORS)

(HYPOTENSION)

(BROMINE--PHYSIOLOGICAL EFFECT)

Country : USSR
 Category : Human and Animal Physiology, Blood T
 Abs. Jour. : Ref Zhur - Biol., No. 2, 1959, No. 7948
 Author : Rafal'son D.; Ashkinazi L.; Diakanovich S.
 Institution :
 Title : The Role of the Central Nervous System in the Mechanism of Blood Regeneration in Donors.
 Orig. Pub. : V sb.: Aktual'n. vopr. pereliv. krovi. Vyp. 5, Leningrad, 1957, 14--21
 Abstract : The study was performed on 175 donors between the ages of 21 and 50 who had been donors for at least 3 years. Normal regeneration of blood was observed in 100 donors after they had given blood; in 75, regeneration was diminished. According to type of higher nervous activity, the donors were designated as strong, weak and intermediate. Bromine and strychnine were used to alter the reaction of the organism to giving blood. When Br was given (30 ml of a 3% solution 1 hour before blood was taken), in those donors with reduced blood regeneration the fall

Country : USSR
 Category: : Human and Animal Physiology, Blood T
 Abs. Jour. : Ref Zhur - Biol., No. 2, 1959, No. 7948
 Author :
 Institut. :
 Title :

Orig. Pub. :

Abstract : in Hb, erythrocyte and reticulocyte levels immediately after 280 ml of blood was taken and five days later was negligible in comparison with that seen in the donors which did not receive Br. The same result was observed in donors with normal and retarded regeneration after 400 ml of blood was taken. Donors with retarded blood regeneration which did not receive Br showed a sudden drop in red blood indices after losing 280 ml of blood. Strychnine exerted a regulatory effect on donors

Card:

2/4

Country : USSR
Category : Human and Animal Physiology, Blood
Abs. Jour. : Ref Zhur - Biol., No. 2, 1959, No. 7948

Title :

Orig Pub. :

Abstract : with reduced regeneration (10) in the sense of equalizing the red cell indices following the loss of blood. A diminished regenerative capacity was observed most often in the weak type of donor. Blood regeneration in donors after giving blood is accomplished in the presence of the regulatory influence of the central nervous system. Pharmacological agents can to a certain extent affect the reaction of the donor's blood following blood loss and the time required for replacement of the blood. When the regenerative capacity of the blood is 3/4

Card:

Country : USSR
Category: : Human and Animal Physiology, Blood T
Abs. Jour. : Ref Zhur - Biol., No. 2, 1959, No. 7948
Author :
Institut. :
Title :

Orig. Pub. :

Abstract : poor, it is useful to prescribe Br in combination with Fe preparations.--M.I.Yershovich

Card: 4/4

ASHKINAZI, L.I.

VOROB'YEV, A.A.; ASHKINAZI, L.I.; RODYAKINA, V.Ya.; RAFAL'SON, D.I.;
BRON, O.B.

Change in the blood as an index of the general reaction of the
organism to the administration of precipitated anatoxin. Zhur.
mikrobiol.epid. i immun. 28 no.1:84-89 Ja '57. (MLRA 10:3)

1. Iz Leningradskoy gorodskoy stantsii perelivaniya krovi i Voenno-
morskoy meditsinskoy akademii.

(CLOSTRIDIUM TETANI,

toxin, eff. on blood (Rus))

(BLOOD,

eff. of Clostridium tetani toxin (Rus))

ASHKINAZI, M. I.

ASHKINAZI, M. I. -- "Technical-Economic Investigation of Vertical Non-Elevated Steel Gasoline Tanks at the Petroleum Bases of the Urban Economy." Min Higher Education USSR. Moscow Order of Labor Red Banner Construction Engineering Institute V. V. Kuybyshev. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

No 1

SO: Knizhnaya Letopis', 1956, pp 102-122, 124

LESSIG, Ye.M.; kandidat tekhnicheskikh nauk (Dnepropetrovsk);
ASHKINAZI, M.I., kandidat tekhnicheskikh nauk (Dnepropetrovsk)

Vertical cylindrical tanks with spherocylindrical roofs. Stroi.
pred.neft.prom. 1 no.7:3-5 8 '56. (MLRA 9:10)

(Tanks) (Petroleum--Storage)

PHASE I BOOK EXPLOITATION

SOV/4928

Ashkinazi, Mikhail Isayevich

Rezervuary so sferotsilindricheskoy kryshey; opyt stroitel'stva i ekspluatatsii (Tanks With a Spherical Roof; Construction and Operation Experiment) Moscow, Gostoptekhzdat, 1960. 40 p. 2,120 copies printed. (Series: Novaya tekhnika neftyanoy promyshlennosti)

Executive Ed.: O. I. Polyanskiy; Tech. Ed.: A. V. Trofimov.

PURPOSE: This booklet is intended for engineers and technicians concerned with the design, production, and operation of stationary storage tanks.

COVERAGE: The booklet describes 400 to 2000 m³ capacity storage tanks with spherical-cylindrical roofs, designed by Dnepropetrovskiy inzhenerno-stroitel'nyy institut (Dnepropetrovsk Engineering Construction Institute). The tanks are made for storing volatile products such as aviation gasoline, etc., under water column pressure 2,000-3,000 mm. Comparison with other storage tanks and an engineering economic analysis of

Card 1/3

SAFARYAN, Misak Karapetovich; ASHKINAZI, Mikhail Isayevich; CHOLYAN, Genrik Saakovich; RAZUMOVSKAYA, T.Ya., red.; DEMIDOV, Ya.F., tekhn. red.

[Steel tanks with spherical cylindrical roofs for petroleum products; experimental and theoretical studies of the construction] Stal'nye rezervuary so sferotsilindricheskoi krovlei dlia nefteproduktov; eksperimental'nye i teoreticheskie issledovaniia konstruktsii. Moskva, VNIIST Glavgaza SSSR. Redaktsionno-izdatel'skii ot-del, 1961. 94 p. (MIRA 15:11) (Tanks)

ASHKINAZI, M.I.

Investigation of the conditions under which gas-equalizing systems
may be used for tanks with increased pressure. Transp. i khran.
nefti. no.9:11-17 '63. (MIRA 17:1)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut.

ASHKINAZI, M.I.; VASYUTA, Yu.S.

Efficient use of standard tanks in a gas equalizing system. Transp.
i khran. nofti pt. c no.2:21-26 '63. (MIRA 17:10)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut i Vsesoyuznyy
nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh
truboprovodov.

ASHKINAZI, M.I.

Study of the economic aspect of various systems of steel tanks
of great capacity for storing petroleum products. Sbor. nauch.
trud. Dnepr. inzh.-stroi. inst. no.31s133-136 '63 (MIRA 18:1)

ASHKINAZI, M. O.

Determination of molybdenum in high chromium steel
B. I. Greenberg and M. O. Ashkinazi, *Leningradskaya Lab*
14, 1133(1948). - Steels contain 0.5 to 1.0% Cr are success-
fully analyzed as follows: Dissolve 0.5 g. of sample in
15-20 ml. of 7 N H₂SO₄ (with heating until dissolved).
Oxidize with 2-3 ml. of concd. HNO₃, and heat until N
oxides are expelled (if carbide residue persists, add 3-4
ml. 10% (NH₄)₂SO₄ and heat, then 10-20 ml. of the above
acid mixt. and boil the soln. until the persulfate is de-
stroyed). Simultaneously, treat a sample of standard steel
with addn. of Cr comparable to that in the test sample.
Cool both solns. and dil. to 100 ml. Take 10 ml. all
quots and mix with 35 ml. of the above acid mixt. and 40-5
ml. water followed by 3 ml. of 30% KCNS and 5 ml. of
SnCl₂ soln. (10 g. in 100 ml. of 2.5 N HCl). Dil. to 100 ml.
and compare the red color after 15 min. visually or in a
colorimeter. G. M. Kosolapoff

Dnepropetrovsk Metal Factory imeni Lenin

AND SEE ALSO THE FOLLOWING LITERATURE CLASSIFICATION

ASHKINAKI, M.S.

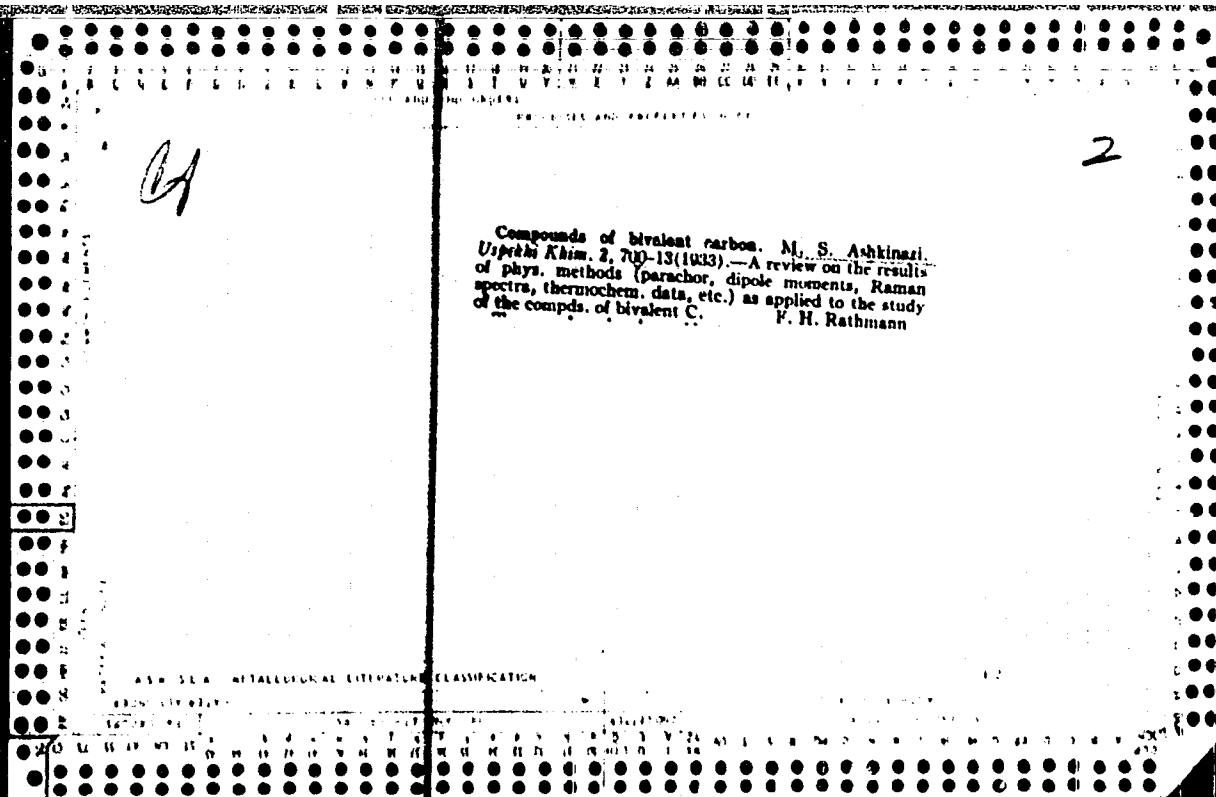
RELATION BETWEEN COMPLEX FORMATION, SOLVATION AND FORMATION OF AN ELECTRO-CONDUCTIVE SYSTEM. Electrochemical properties of the system: acetamide bromo-nitrobenzene. The amphoteric nature of bromine. V. S. FINKELBERG AND M. S. ASHKINAKI. J. Chem. Chem. (U. S. S. R.) 2, 790-9 (1952), cf. P. J. Russ. Phys. Chem. Soc. 88, 318 (1928); C. A. 20, 2377; F. and Kutra, C. A. 22, 1527, 23, 3382. The purpose of the present investigation was to show the existence of the ion Br_2^{+} and thus prove that the acid amides in their interrelation with Br_2 act as bivalent metals and thus prove that the acid amides in their interrelation with Br_2 act as bivalent metals. Cryoscopic and electro-cond. methods were used, while the presence of Br_2^{+} ion in $PhNO_2$ was detd. by electrolysis with the Bruner Ag anode (C. A. 8, 906), covered with AgBr, and Pt cathode. When $AcNH_2$ is added to solns. of Br_2 in $PhNO_2$, an addn. reaction occurs because the mean mol. wt. calcd. according to the law of addn. was always less than that detd. by the cryoscopic measurements. Data for cond. of the system $AcNH_2$ - Br_2 - $PhNO_2$ show (1) formation of $AcNH_2Br_2$, (2) its disson in dil. soln. and (3) its assocn. in more concd. soln., which greatly increases with an excess of $AcNH_2$. Evidently these processes depend upon the formation of an electroconductive complex, which is explained as follows: From the disson equation $Br_2 \rightleftharpoons Br^+ + Br^-$ (Wahlen, Z. Physik. Chem. 43, 416 (1933)), the addn. of $AcNH_2$ to the weakly disson Br_2 (sp. cond. 10^{-4}) gives the reaction $AcNH_2 + Br_2 \rightleftharpoons (AcNH_2Br_2)^+ + Br^-$ with a decrease in mol. wt. The complex possesses great tendency to polymerize so that in highly concd. solns. the excess of $AcNH_2$, by decreasing the no. and the mobility of ions, not only retards the rise of cond. but even checks or reverses it. Complex formation and solvation are the basic factors in the formation of electroconductive systems in solvents with a low dielec. const. (Motnikov, Z. Physik. Chem. 48, 228 (1944), C. A. 26, 1189, 1290, 3155). This scheme is substantiated by the initial stages of the Hofmann

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ASAC-514 METALLURGICAL LITERATURE CLASSIFICATION

reaction (Rev. 14, 2720(1981)) and at the same time explains its mechanism: $\text{RCO-NH}_2 + \text{Br}_2 \rightarrow (\text{RCO-NH}_2\text{Br})^+\text{Br}^-$; $(\text{RCO-NH}_2\text{Br})^+\text{Br}^- + \text{K}^+\text{OH}^- \rightarrow (\text{RCO-NH}_2\text{Br})^+\text{OH}^-$; $(\text{RCO-NH}_2\text{Br})^+\text{OH}^- \rightarrow \text{RCO-NHBr} + \text{H}_2\text{O}$. The last equation is analogous to the reaction of decomp. of the hydroxy compds. of all amines into an amine and H_2O . In all such systems the electrolyte is not the amide but the solvated and disocd. mols. of Br_2 . In Br_2 or its solns. there are 2 types of mols., ionogenated and unionogenated, with possible dynamic equil. between them: $\text{Br}_2 \rightleftharpoons \text{Br}^+\text{Br}^- \rightleftharpoons \text{Br}^+ + \text{Br}^-$, or if the complete disocn. of the ionogenated mols. is accepted, then the equil. between

unionogenated mols. and ions is: $\text{Br}_2 \rightleftharpoons \text{Br}^+ + \text{Br}^-$. Thus the amphoteric nature of Br_2 is demonstrated as it was for I (P., C. A. 21, 1051).
CHAS. BLANC



ASHKINAZI, M. d-1

Raman effect in aqueous electrolytic solutions. II. Solutions of antimony trichloride. M. ASHKINAZI, P. KURNOSOVA, and V. FINKELSTEIN (Acta Physicochim. U.R.S.S., 1936, 4, 317-324; cf. this vol., 1303).—The Raman spectra of 8-35% solutions of $SbCl_3$ in H_2O have been determined. Undissociated moles. exist in solution and there is no evidence of compound formation, since no new lines appear. The Raman spectra of 15-23% solutions of $SbCl_3$ in C_2H_6 show two new lines, of frequencies 477 and 1226 cm^{-1} , corresponding with the compound $SbCl_3 \cdot C_2H_6$. R. S. B.

ASB-35A METALLURGICAL LITERATURE CLASSIFICATION

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Raman effect in aqueous solutions of electrolytes
 11. Solutions of antimony trichloride. M. S. Ashkinazi,
 P. V. Kurnosova and V. S. Finkel'stein. *J. Phys. Chem.*
 (U. S. S. R.) 7, 438-44 (1960); cf. C. A. 56, 3732; *Acta*
Physicochimica (U. R. S. S.), 6, 317-24 (1960). Data also
 given for SbCl₃ in Et₂O and benzene. The former gives
 no new Raman lines; in benzene soln. the new frequencies
 177 and 12.60 cm⁻¹ indicate the complex SbCl₃·C₆H₆.
 F. H. Rothmann

ASAC-514 DETAILORICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS		PROCESS AND PROPERTY INDEX		3RD AND 4TH ORDERS	
The Raman effect of solutions of sulfuric acid in methyl and ethyl alcohols. M. S. Ashkinazi and P. V. Kurnosov. <i>J. Phys. Chem.</i> (U. S. S. R.) 11, 848 51 (1959). Photographs of the Raman spectra of the solns. of H_2SO_4 (48%) in CH_3OH (10, 20, 30 and 40%) and in C_2H_5OH (10, 20, 30, 40 and 50%) were taken with 20-hr. exposures. Frequencies of CH_3OH were observed in all concns. of the $CH_3OH + H_2SO_4$ solns. The 1034 cm^{-1} frequency (belonging to the $C-O$ group in CH_3OH) decreased, and the 2912 cm^{-1} frequency (belonging to the $C-H$ group in CH_3) increased with an increase of the H_2SO_4 concn. In the H_2SO_4 spectra the 911, 1170 and 1547 cm^{-1} frequencies were missing. From this it can be concluded that the modified spectrum of H_2SO_4 belongs to the methylsulfuric acid. The C_2H_5OH frequencies were also observed in all concns. of the $C_2H_5OH + H_2SO_4$ solns. The 1016 cm^{-1} frequency (belonging to the $C-O$ group of C_2H_5OH) decreased, and the 2971 cm^{-1} frequency (belonging to the $C-H$ group in CH_3 of C_2H_5OH) increased with an increase of the H_2SO_4 concn. All other frequencies remained practically unchanged. The fact that H_2SO_4 spectra changes were observed similar to those observed in the $CH_3OH + H_2SO_4$ solns. showed that here also ethylsulfuric acid was formed. 10 references. W. R. Henn					
ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION					
SOURCE SYMBOL		SUBJECT MATTER ONLY		COLLECTION	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	

11

PROCESSES AND PROPERTIES INDEX

*Quantitative Spectrographic Analysis of Bronzes. M. S. Ashkinazi (*Lasp.* *Atod. Nauk U.R.S.S.*, 1940, 37-39; *Chem. Zentr.*, 1942, 113, (1), 3237; *C. Abs.*, 1943, 87, 3897).—[In Russian.] The spectrometric determination of Mn, Zn, Fe, and Al in bronze is described in detail. In establishing the mean values for the standard samples, 6 specimens were examined in every case and photographed on 10 plates, and on each plate the results of 3 chemical tests were also given.

ASH-514 METALLURGICAL LITERATURE CLASSIFICATION

11

m

***Spectral Analysis of Bronze for Manganese, Zinc, and Iron.** M. S. Ashkinazi and H. B. Tripol'skaya (Zerod. Lab. (Works' Lab.), 1940, 9, 170-182; *C. Abs.*, 1940, 24, 5784).—[In Russian.] Bronze containing Mn 0.2-1, Zn 0.2-2.3, and Fe 0.45-0.8% was analyzed with a Hilger quartz spectrophotograph by means of the following pairs of lines: Mn-2933, Cu-2961 for Mn; Zn-3345, Cu-3308 for Zn; and Fe-2382, Cu-2357 for Fe. Analysis was by the Zeiss method; the determination of each element requires not more than 20 minutes. Deviations did not exceed 7%.

COMMON ELEMENTS

AS - 1.1 - METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDER																										3RD AND 4TH ORDER																									
PROCESSES AND PROPERTIES INDEX																																																			
<i>(Handwritten: M)</i> Spectrographic Analysis of Bronzes by a Simplified Single-Standard Method. M. S. Ashkinazi and R. N. Tripol'skaya (<i>Izvest. Akad. Nauk S.S.S.R.</i>, 1941, [Phys.], 8, (2/3), 289-292).—[In Russian.] The method is based on the observation (made by others besides A. and T.) that, in the three-standard method of analysis, the calibration curves showing $\log C$ against ΔS for the same line pair on different plates all intersect in a point which, within the limits of experimental error, lies on the line $\Delta S = 0$. [C = concentration of element being determined and ΔS = line density difference.] By making use of this fixed point, it becomes necessary, in determining the calibration curve, to take only one standard on a plate with the specimens being analysed, and to draw the straight line through this fixed point and the point corresponding to the line density difference for the standard. Some results obtained by this method in determining Mn, Sn, and Zn in bronzes are given and are compared with the values obtained by the three-standard method and by chemical analysis. It is claimed that the accuracy of the single-standard method is somewhat higher than that of the three-standard method. —N. B. V.																																																			
ASS-55A METALLURGICAL LITERATURE CLASSIFICATION																																																			
1ST ORDER																										2ND ORDER																									
3RD ORDER																																																			

1ST AND 2ND INDEX		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH INDEX	
ASHKINADZI, M. S. <i>Spectrographic Analysis of Bronzes. Simplification of the Three-Standard Method.</i> M. S. Ashkinadzi and R. B. Tripol'skaya (Zetov. Lab., 1941, 10, (6), 624-628).—[In Russian]. A method is proposed for constructing analytical curves from a single standard. The analysis of bronze for Zn (0.8-3.3%), Sn (5.7-10.2%), and Mn (0.7-1.8%) gives satisfactory results by this method. <i>U.S. Invest. And. Naut. S.S.S.R., 1941, [Vol.], 5, (2/3), 289-292; Met. Abs., 1944, 11, 299.—N. A.</i>					
ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION					
1941-1944					

CA

The "single-standard" method. M. S. Ashkinazi.
Izv. Akad. Nauk S.S.S.R., Ser. Fiz. 12, 439-441 (1948).
—The simplified spectral-analysis method (Zorodskaya,
Lab. 10, 624 (1941); C.A. 37, 2301¹) was applied to the
detr. of Mn, Mg, Cu, and Fe, in Al alloys, with results
not inferior to those of the usual 3-standard method.
Further applications are to Mn, Cr, and Ni, in steel, by
the line pairs Mn 2933-Fe 2937, Cr 2077-Fe 2080,
and Ni 3414-Fe 3300, resp. In the detr. of Al, by
line pairs of Al alone, 2652-2608, 3050-3057, and 2652-
3057, the best independence of the intensity ratio of the
contrast coeff. of the photographic plate was found with
the 2nd line pair. N. Thon

ASHKINAZI, M. S.

Ashkinazi, M. S., Kutsaya, B. F., and Frenko, A. S. - "A simplified method of determining the contrast factor", (Of photographic plates), Ukr. khim zhurnal, Vol. XIV, Issue 2, 1949, 47-52.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 21, 1949).

ASHKINAZI, M. S. i. KOSTRYUKOVA, E. P.

28228

Spyektry Pogloshcheniya khlorida myedi v Etilovom spirtye UKr. khim.
zhurnal, T. XV. BYP. 2, 1949, s. 227-33 - Bibliogr: 8 nazv.

SO. LETOPIS NO. 34

CA

Effect of solvent on the spectra of electron transfers of copper ions. M. S. Ashkinazi and E. P. Kostyukova

(Acad. Sci. Ukrain. SSR, Kiev). *Zhur. Fiz. Khim.* 23, 1410-1416 (1949). Since the ultraviolet absorption bands of ions in soln. are assocd. with electron transfer from the ion to its solvate envelope or in the opposite direction, these bands should have greater wave lengths the smaller the ionization potential V of the solvent. This was generally confirmed by Cu^{2+} spectra in H_2O , MeOH , EtOH , PrOH , and BuOH ; e.g., $\log K = 1.4$ was observed at 280, 285, 290, 295, and 300 m μ , resp. The order of abs. was not identical with that for V , and the $\log K$ versus wave length curves crossed at lower wave lengths. These peculiarities presumably were caused by difference in potential energy of the system before and after electron transfer. For the detm., $\text{Cu}(\text{ClO}_4)_2 \cdot 6\text{H}_2\text{O}$ was dissolved in H_2O or aqs. contg. HClO_4 and some water. $\log K$ was independent of the concn. of $\text{Cu}(\text{ClO}_4)_2$ (0.015-0.135 M) and of HClO_4 (0.10-0.58 M). In visible light, $\log K$ was identical for solns. in H_2O and MeOH . Irradiation of a $\text{Cu}(\text{ClO}_4)_2$ soln. in EtOH with a quartz Hg lamp caused formation of AcH , pptn. of Cu_2O and increase of the H^+ concn. J. J. Hukerian

C.A

11 D

Reaction of chlorophyll with inorganic ions. M. S. Ashkharov, F. S. Chikman, and H. Ya. Izmest'eva. *Plasmafizika*, 1969, No. 1, p. 73, 74, 75. (Sov. Phys. Plasma Phys., 1969, No. 1, p. 73, 74, 75.) That the weakening of the green color of chlorophyll solutions by Fe^{3+} ions is not due to a reversible oxidation to a hypothetical oxychlorophyll, as claimed by Kautsky and Weiss (C. J. 31, 2243, 1959), is demonstrated by the fact that the red absorption band is accentuated not only by Fe^{3+} , but also by Al^{3+} and Sn^{4+} ions. On the other hand, Cu^{2+} and Zn^{2+} ions increase the intensity of the absorption in the red, with the Cu^{2+} producing also some shift of the band to shorter waves. K^+ , Ca^{2+} , Mg^{2+} , and Mn^{2+} ions are without effect. There are indications of 2 kinds of interaction. One consists in the action of HCl and $SnCl_4$ and manifests itself by a lowering of the intensity of the red absorption band, and an enhancement of the absorption bands 265 and 345 m μ , characteristic of pheophytin; the effect of Fe^{3+} ions is largely due to this type of interaction. The 2nd type consists in the formation of deep green complexes of pheophytin with Fe^{3+} ions, particularly with Cu^{2+} and Zn^{2+} ; these latter complexes absorb in the same red region as chlorophyll. This is demonstrated directly by the effect of Cu^{2+} , Zn^{2+} , and Fe^{3+} ions (under conditions of exclusion of oxidation to Fe^{3+}) on solutions of pheophytin, obtained by the action of HCl on chlorophyll. The olive-yellow color of pheophytin over to bright green. Salts of Mn^{2+} and Pb^{2+} increase the absorption in the red only very slightly, whereas salts of K^+ and Ca^{2+} are without effect. The restoration of the bright green color by Fe^{3+} ions is thus in no way related to their reducing action, but is due to complex formation. If an aqueous solution of $FeCl_3$ is mixed with an aqueous solution of chlorophyll, allowed to stand 24 hrs., with per. ether, and the ext. washed with H_2O until complete disappearance of the last traces of Fe , the colored dry residue of the ext. is found to contain significant amounts of Fe and no Mg ; the latter is found in chlorophyll and Fe proceeds by way of displacement of Mg by Fe . This displacement is very likely to take place in chloroplasts. N. Thon

ASHKINAZI, M.S.

Use of the standardless method in spectrum analysis of ferrous metals.
Ukr.khim.zhur.17 no.2:173-175 '51. (MIRA 9:9)

1. Institut fizicheskoy khimii AN USSR.
(Metals--Spectra)

ASHKINAZI, M.S.; GLYKMAN, T.S.; ABRANOVA, T.N.

Effect of inorganic ions on absorption spectra of chlorophyll.
Ikr.khim.zhur.17 no.2:176-180 '51. (MLRA 9:9)

1. Institut fizicheskoy khimii AN USSR.
(Ions) (Chlorophyll--Spectra)

CA

3

Photochemical properties of complexes of chlorophyll with iron. M. N. Ashkinazi and B. Ya. Dalin (L. V. Pisarzhevskii Phys.-Chem. Inst., Acad. Sci. Ukr. S.S.R.). *Doklady Akad. Nauk S.S.S.R.* 80, 385-R (1951); cf. *C.A.* 45, 1200d. — The reduced form of the complex (I) was prepared by the action of a fresh aprotic soln. of $\text{Fe}(\text{AcO})_3$ on a soln. of pheophytin (a + b) in AcOH , heating, extr. with CHCl_3 , washing the ext. until disappearance of Fe , evap. to dryness, and soln. in EtOH ; all operations were carried out with strict exclusion of O_2 , under N_2 , rigorously freed from O_2 . The oxidized form (II) was obtained from I by oxidation with air. The absorption spectrum of I is characterized by a band with a max. at 645 m μ , II by a max. at 610 m μ ; both absorption curves are shifted to shorter waves as compared with chlorophyll. Strong illumination of II, previously outgassed through prolonged evacuation with repeated freezing out, results in gradual disappearance of the 610-m μ band, and gradual increase of the absorption in 645 m μ . This indicates photochem. reduction of II to I. If the photoreduced product is shaken with air, the 610-m μ band reappears, with a somewhat lower intensity than originally, possibly owing to a partial irreversible change. The photoreduction is not observed unless the product has been previously outgassed. It is independent of the temp. between 10 and 22°. I is exceedingly sensitive to traces of O_2 , and is slowly oxidized even under N_2 , which has not been rigorously freed from O_2 . Oxidation of I to II is markedly accelerated by illumination with white light, and even more with a Hg-vapor lamp.

N. Thon

Inst. Phys Chem in PISARZHEVSKIY, Acad Sci USSR

1. ASHKINAZI, M. S.; GLIKMAN, G. S.; DAYN, B. YA.
2. USSR (600)
4. Iron Salts
7. Nature of the interaction of chlorophyll with iron salts, Ukr. khim. zhur., 17, no. 1, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ASHKINAZI, M. S.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Biological Chemistry

③
Interaction of chlorophyll with iron salts. M. S. Ashkinazi, T. S. Glikman, and B. Ya. Dain. *Ukrain. Khim. Zhur.* 18, 49-54 (1952); cf. C.A. 45, 1209d. --Reiteration of the previous statement that the changes in absorption spectra of chlorophyll on the addn. of Fe^{++} or Fe^{+++} are due to complex formation rather than oxidation-reduction phenomena.
J. P. Danchy

ASHKINAZI, M. S.

Photochemical properties of the zinc and copper analogs of chlorophyll. M. S. Ashkinazi and V. E. Karpitskaya, *Ukrain. Khim. Zh.* 30, 471 (1954) (in Russian); cf. Ashkinazi and Dain, *C.A.* 46, 3187. The existence of oxidized forms of Zn- and Cu-contg. chlorophyll analogs similar to the iron complex would indicate that oxidation is not related to change in valence of the central metal atom, but proceeds with involvement of the org. portion of these compds. Data obtained indicate that the effects observed in alc. solns. of chlorophyll and its analogs are related to photoreduction, which leads first to intermediary colored products with an absorption max. at 680 m μ . The Zn and Cu chlorophyll analogs are more resistant to photoreduction than chlorophyll. Absence of a high absorption max. at 680 m μ in the photoreduced state of the Zn and Cu chlorophyll analogs is evidence for the formation of a different type of intermediary product.

ASHKINAZI, M. S.

USSR/Chemistry

Card 1/2

Authors : Ashkinazi, M. S., and Karpitskaya, V. E.

Title : Photochemical properties of metalliferous chlorophyll analogues

Periodical : Dokl. AN SSSR, 96, Ed. 4, 785 - 788, June 1954

Abstract : An analysis is given of the results obtained during comparative investigation of the photochemical properties of an iron-containing chlorophyll analogue and the method of obtaining iron-containing chlorophyll analogues is described. Experiments show, that the reduction of the investigated metal-containing chlorophyll analogues is gradual and complete destruction of the conjugated bond system is attained through intermediate formation of colored products. Neither the zinc nor the copper derivation have a more high-

Dokl. AN SSSR, 98, Ed. 4, 785 - 788, June 1954

(Additional Card)

Card 2/2 .

Abstract : oxidation form. This indicates, that the revivation conversions of iron complexes are connected with the change in valence of the iron atom. One reference. Graphs.

Institution : Acad. of Sc. USSR-SSR, The L. V. Pisarzhevskiy Institute of Phys. Chem.

Presented by: Academician A. N. Terenin, March 6, 1954

Ashkinazi, M. S.

USER/Chemistry - Physical chemistry

Card 1/1

Pub. 22 - 30/53

Authors : Ashkinazi, M. S.; Gerasimova, I. P.; and Dain, B. Ya.

Title : Photochemical investigation of iron pheophorbides

Periodical : Dok. AN SSSR 102/4, 767-770, Jun 1, 1955

Abstract : Pheophorbide, a split product of chlorophyll, was investigated by the photochemical method to determine the processes occurring during the photosynthesis and to obtain data regarding the reaction of its pigments when exposed to the effects of visible light quanta. The reversible oxidation-reduction conversion properties of iron pheophorbides are explained. The method of preparing iron pheophorbides - analogues of chlorophyll - is described. Results of the photochemical investigation are analyzed. Four references: 2 USA, 1 German and 1 USSR (1932-1953). Graphs.

Institution : Acad. of Sc., Ukr. SSR, The L. V. Pisarshevskiy Inst. of Phys. Chem.

Presented by : Academician A. N. Terenin, January 15, 1955

ASHKINAZI, I.P. D.S.

USSR / Physical Chemistry. Molecules, Chemical Bond.

B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25753

Author : M.S. Ashkinazi, I.P. Gerasimova, B.Ya. Dain.

Inst : Academy of Sciences of USSR

Title : Influence of Water on Absorption Spectrum and Photosensitivity of Iron Pheophorbide.

Orig Pub : Dokl. AN SSSR, 1956, 108, No 4, 655-658

Abstract : The absorption spectra of oxidized pheophorbide a (I) in alcohol, acetone, acetonitrile, chloroform (II), benzene and toluene in the range of 500 to 700 mμ were photographed. It was shown in accordance with earlier found regularities (RZhKhim, 1956, 25216) that the spectrum of carefully dehydrated I is characterized with the maximum absorption in range of 620 to 625 mμ. After an addition of water (III), the spectrum changes sharply, the maximum at 620 to 625 mμ disappears nearly completely and a band at 675 to 680 mμ appears simultaneously. The described effect is displayed in

Card : 1/2

- 13 -

Ashkinazi, M.S.

AUTHORS: Ashkinazi, M.S. and Kryukov, A.I.

21-4-12/24

TITLE: Reversible Photochemical Transformations of Hemin (Oborotni fotokhimichni peretvorenniya heminu)

PERIODICAL: Dopevidi Akademii Nauk Ukraini's'koi RSR, 1957, #4, pp 368-370 (USSR)

ABSTRACT: It is shown that hemin can be easily reduced into hem by the photochemical way, by irradiation with visible light.
The effect of visible light on ethanolic, ethanol-aqueous alkaline and aqueous alkaline solutions of hemin was studied.
1,000-w movie bulbs were used as sources of light for irradiation. Absorption spectra were taken with a spectrophotometer of the "CΦ-4" type.
Figure 1 in the article shows that the absorption curve of the initial hemin solution in ethanol changes its shape after irradiation: peaks at 500 and 610 mμ disappear and a new peak at 550 mμ arises.
The behavior of hematin in the ethanol-aqueous alkaline solution

Card 1/2

TITLE:

Reversible Photochemical Transformations of Hemin (Oborotni fotokhimichni peretvorenniya heminu)

21-4-12/24

is also similar, as shown in Figure 2 in the article.

The irradiation of the aqueous alkaline solution of hematin without addition of ethanol does not lead to its photoreduction. The absorption curve of the initial solution remains the same after 30 hours of irradiation.

These results make it possible to assume that labile hydrogen atoms of the CH-group in positions 7-8 play some role in the photoreduction process of iron-containing derivatives of chlorophyll.

The article contains 3 graphs.

There are 4 references, 3 of which are Slavic.

INSTITUTION: Institute of Physical Chemistry of the Ukrainian Academy of Sciences

PRESENTED BY: Brodskyy, O.I. (Russian equivalent - Brodskiy, A.I.), Member of the Ukrainian Academy of Sciences.

SUBMITTED: 6 December 1956

AVAILABLE: At the Library of Congress

Card 2/2

ASHKINAZI, M.S.

ASHKINAZI, M.S.; KRYUKOV, A.I.

Effect of visual light on iron chlorine solutions. Ukr.khim.zhur.
23 no.4:448-453 '57. (MIRA 10:10)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN USSR,
otdel fotokhimii.

(Chlorophylls) (Photochemistry)

ASHKINAZI, M.S.; KRYUKOV, A.I.

Photosensitive complexes of iron pheophytin (III) with certain
salts. Dop.AN URSR no.4:493 '60. (MIRA 13:7)

1. Institut fizicheskoy khimii im. L.V.Pisarshevskogo AN USSR.
Predstavleno akademikom AN USSR A.I.Brodskim (O.I.Brods'kym].
(Pheophytin)

ASHKINAZI, M.S.; KRYUKOV, A.I.

Photochemical radiation of ferric pheophorbide. Ukr. khim. zhur.
26 no.5:600-604 '60. (MIRA 13:11)

1. Institut fizicheskoy khimii im. L.V. Pisarshevskogo AN USSR, otdel
fotokhimii.

(Pheophorbides)

ASHKINAZI, M.S.; DOLIDZE, I.A.; KARPITSKAYA, V.Ye.

Stable products of pheophytin photoreduction. Biofizika 6 no.3:
294-299 '61. (MIRA 14:6)

1. Institut fizicheskoy khimii imeni L.V.Pisarzhevskogo AN USSR,
Kiyev.

(PHEOPHYTIN)

(PHOTOCHEMISTRY)

11577
S/O20/62/146/004/012/015
B101/B106

11 1265
11 110

AUTHORS: Karpitskaya, V. Ye., Dolidze, I. A., Ashkinazi, M. S.

TITLE: Formation of free radicals in autocxidations photosensitized by chlorophyll or pheophytin

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 4, 1962, 844 - 847

TEXT: The authors were the first to observe the formation of free radicals in the autooxidation of diphenyl amine or p-phenylene diamine, photosensitized by chlorophyll a or pheophytin a. This process is assumed to be similar to that of photosynthesis in plants. 10⁻⁵ moles/l chlorophyll a was added to 10⁻² moles/l ethanol solution of diphenyl amine. The solution was then exposed to a 1000 w lamp, with a red filter, at 20 - 22°C. After 10 - 15 min the green solution turned brown. The blue absorption maximum of the spectrum was somewhat intensified, the absorption in the 400 - 560 mμ region increased considerably, and the red maximum was slightly weakened. The only difference in the effect of pheophytin a was that the intensity of the red band remained unchanged. The pink reaction product soluble in water, showed intensive absorption maxima at 460 and

Card 1/3

S/020/62/146/004/012/015
B101/B186

Formation of free radicals in ...

260 mμ, whereas the 285 mμ maximum characteristic of diphenyl amine was absent. The pink product must have been formed by oxidation of diphenyl amine, since the spectrum remained unaffected by the action of oxygen in the dark and by irradiation of diphenyl amine solution containing chlorophyll, which had been degassed at low absolute pressure. Oxidation is not intensive, as the effect of reducers such as ascorbic acid, hydrazine, or hydroquinone immediately eliminates the maxima at 460 and 260 mμ and restores the 285 mμ band of diphenyl amine. The oxidation product can be additionally oxidized by the action of oxygen at 70°C, giving a spectrum which corresponds to that of diphenyl amine oxidized in the dark and which is ascribed to diphenyl nitrogen oxide according to R. Hoskins (J. Chem. Phys., 25, 788 (1956)) and J. R. Thomas (J. Am. Chem. Soc., 82, 5955 (1960)). The oxidation product of diphenyl amine obtained by photosensitized chlorophyll or pheophytin, is therefore considered to be the free diphenyl nitrogen radical $(C_6H_5)_2N^{\cdot}$. Its epr spectrum is a triplet with a component intensity of 1 : 1 : 1 and an intervening distance of 11 oersteds. Autooxidation of p-phenylene diamine with photosensitized pheophytin yielded a reddish yellow product with absorption maxima at 462 and 480 mμ. This product does not form in vacuo, nor under the action of

Card 2/3

Formation of free radicals in ...

S/020/62/146/004/012/015
B101/B186

oxygen in the dark. Its epr spectrum is a singlet 14 oersteds wide and has a lifetime of 1.5 - 2 hrs; it is ascribed to the positive ion of p-phenylene diamine owing to a similar epr spectrum having been obtained by L. Michaelis et al (J. Am. Chem. Soc., 61, 1981 (1939)). There are 4 figures.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo
Akademii nauk USSR (Institute of Physical Chemistry imeni
L. V. Pisarzhevskiy of the Academy of Sciences UkrSSR)

PRESENTED: May 30, 1962, by A. N. Terenin, Academician

SUBMITTED: May 22, 1962.

Card 3/3

ASHKINAZI, M.S.; KARPITSKAYA, V.Ye.; PAIN, B.Ya. (Kiyev)

Photochemical oxidation of diphenylamine. Zhur. fiz. khim. 38
no.12:2889-2894 D '64. (MIRA 18:2)

1. Institut fizicheskoy khimii imeni L.V. Pisarzhevskogo AN UkrSSR.

L 22592-65

ACCESSION NR: AP5004240

5/0021/65 000/001/0001/0009

AUTHOR: ABDULAZIZ, M. S.; Karpits'ka, V. Ye. (Karpitskaya, V. Ye.); Dayin, B. Ya. (Dain, B. Ya.)

TITLE: Process of photochemical oxidation of diphenylamine

SOURCE: AN JARSR

ABSTRACT: Diphenylamine is photochemically oxidized on exposure to ultraviolet light. The photoproduct is shown to be a stable long-lived free radical. Photooxidation in ultraviolet light proceeds in two stages. First is produced a species that the diphenylamine radical, during the first stage, and the diphenylnitric oxide radical, during the second stage. The mechanism of the photooxidation reaction is proposed.

ASSOCIATION: Instytut fizychnoyi khimiyi AN URSR (Institute of Physical Chemistry, AN URSR)

Card 1/2

ACCESSION NR: AP5004150

SUBMITTED: 02Dec63

ENCLOS: 1

SUB CODE: 001

NO REF SOV: 004

OTHER: 002

Card 2/2

I 10511-66 EWT(m)/EWP(j) EWA(c) RPL JW/RM/DS
 ACC NR: AP5027185 SOURCE CODE: UR/0076/65/039/010/2587/2589
 AUTHOR: Ashkinazi, M. S.; Dolidze, I. A. 44,55 85
 ORG: Institute of Physical Chemistry, Academy of Sciences, UkrSSR (Institut fizicheskoy khimii, Akademiya nauk UkrSSR) 44,55
 TITLE: Dark aftereffect in sensitized photooxidation of Alpha-naphthylamine
 SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 10, 1965, 2587-2589
 TOPIC TAGS: chlorophyll, oxidation, primary aromatic amine, photochemistry, free radical, electron paramagnetic resonance, diphenylamine, electron spin resonance, spectrum, light absorption 44,55
 ABSTRACT: In the photochemical oxidation of diphenylamine sensitized with chlorophyll (pheophytin), free radicals are formed, and a peculiar aftereffect is observed in which, after the illumination has been cut off, a deep-red product is formed in the dark. The reaction does not occur in the presence of a reductant (ascorbic acid). Electron spin resonance (ESR) spectra of the product showed that a free radical is formed. A simultaneous measurement of the change in the intensity of the light absorption spectrum with time and of the ESR signal for the same solution showed that the absorption maximum increases so long as the ESR signal is observed; as soon as the signal vanishes, the intensity of the absorption band ceases to increase. This effect indicates that the free radical formed in the course of the photooxidation participates in some secondary reaction which results in the deep-red product, which has not been identified. Orig. art. has: 3 figures.
 Card 1/2 UDC: 541.14

L 10514-66

ACC NR: AP5027185

SUB CODE: 07 / SUBM DATE: 09J_u164 / ORIG REF: 003 / OTH REF: 001

Cord 2/2

L 25455-66 EWP(1)/EWT(m) RM

ACC NR: AP5002576

SOURCE CODE: UR/0076/64/038/012/2889/2894

AUTHOR: Ashkinazi, M. S. (Kiev); Karpitskaya, V. Ye. (Kiev); Dain, B. Ya. (Kiev) ²⁷_B

ORG: Institute of Physical Chemistry im. L. V. Pisarzhevskoy, AN UkrSSR (Institut fizicheskoy khimii AN USSR)

TITLE: Photochemical oxidation of diphenylamine

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 12, 1964, 2889-2894

TOPIC TAGS: oxidation, photochemical oxidation, ultraviolet oxidation, diphenylamine

ABSTRACT: Diphenylamine is photochemically oxidized by oxygen when exposed to ultraviolet or red light in the presence of chlorophyll as the sensitizer. The product of the sensitized reaction was shown to be a long-life radical (I) absorbing at 460 and 250 mμ. During the ultraviolet oxidation, a stable free radical (II) showing no characteristic peaks in the visible region is also formed. Oxidation in the ultraviolet light proceeds via the free radical (I). Data are presented bearing evidence that the radicals formed in the photochemical reactions are diphenyl-nitrogen (I) and diphenylnitric oxide (II). Reaction arrangements are proposed by the author. [AM]

SUB CODE: 07/ SUBM DATE: 02Dec63/ ORIG REF: 005/ OTH REF: 005

Card 1/1 CC

UDC: 541.14

ASHKINEZER, D.G., inzh.

More attention to spark gaps. Elek. i tepl. tiaga 4 no. 4:24-25
'60. (MIRA 13:6)

1. Mytishchinskiy uchastok energosnabzheniya.
(Electric protection) (Electric lines--Poles)

ASHKINUZI, Z.K.; YUDITSKIY, D.G.

Methods for the water and heat treatment of corn kernels. Fern.
i spirt. prom. 30 no.1:11-13 '64. (MIRA 17:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut spirtovoy i
likero-vodochnoy promyshlennosti (for Ashkinuzi). 2. Kiyevskiy
tekhnologicheskoy institut pishchevoy promyshlennosti im. Mikoyana
(for Yuditskiy).

~~ASHKINUZE, V. G.~~ ASHKINUZE, V. G.

Ashkinuze, V. G. A theorem on the splittability of J -algebras. *Ukrain. Mat. Zhurnal* 3, 381-398 (1951). (Russian)

The author proves the Wedderburn principal theorem for Jordan algebras of characteristic 0 (if R is the radical of A , there exists a subalgebra S such that A is the vector space direct sum of R and S). The method is to prove that all possible simple summands A/R can be lifted to subalgebras of A , and heavy use is made of Albert's techniques as well as of his classification of the simple algebras. Independently, the same theorem was proved by Penico [*Trans. Amer. Math. Soc.* 70, 404-420 (1951); these *Rev.* 12, 798]. Though the two proofs are similar, there are certain technical differences.

I. Kaplansky (Chicago, Ill.).

Sov. Mathematical Reviews, Vol. 14, No. 10, Nov. 53, pp. 935-1048
U. CLASSIFIED

ASHKINUZE, V. G.

Ashkinuze, V. G. -- "The Construction of an Algebra Course for the Eighth Class Based on the Idea of Functional Dependence." Academy of Pedagogical Sciences RSFSR. Inst of Teaching Methods. Moscow, 1956. (Dissertation For the Degree of Candidate in Pedagogical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-114

ASHKINUZE, V.G., nauchnyy sotrudnik; GIBSH, I.A., nauchnyy sotrudnik;
MASLOVA, G.G., nauchnyy sotrudnik; NESHKOV, K.I., nauchnyy
sotrudnik; NIKITIN, N.N., nauchnyy sotrudnik; SEMUSHIN, A.D.,
nauchnyy sotrudnik; FETISOV, A.I., nauchnyy sotrudnik; KOSTE-
LOVSKIY, V.A., red.; TARASOVA, V.V., tekhn.red.

[Teaching mathematics in schools in the 1959/60 school year]
O prepodavanii matematiki v shkole v 1959/60 uchebnom godu. Pod
red. A.D.Semushina. Moskva, 1959. 135 p. (MIRA 13:5)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov
obucheniya. 2. Sektor metodiki prepodavaniya matematiki Instituta
metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for all
except Kostelovskiy, Tarasova).
(Mathematics---Study and teaching)

As H.K. IN UZE, U.C.

16(1)

PHASE I BOOK EXPIRATION 807/2508

Matematicheskoye prosvetsheniye; Matematika, yeye prepodavaniye. Prirochniya i istoriya, voprosy matematicheskoy Edukatsii; Mathematics, its Teaching, Application and History, Mr. 4) Moscow, Gosizdat, 1959. 15,000 copies printed.

Ed.: I.M. Bronskiy; Editorial Board of Editors: I.M. Bronskiy, A.I. Markushovich, I.M. Yaglom; Tech. Ed.: S.M. Achilov.

PURPOSE: This book is intended for persons without an extensive mathematical education who are interested in trends in contemporary mathematics. The book may be useful to high school mathematics teachers.

COVERAGE: The book consists of articles, reviews, and scientific and methodological reports, some of which are translations from other languages. The state of mathematics is covered, including applications, history teaching, mathematics in schools, and mathematical developments in the USSR and abroad. One section deals with scientific and pedagogical life in the USSR and another contains reviews of certain mathematical publications. Some mathematical background is necessary to understand the book; certain articles require a knowledge of higher mathematics.

Mathematical Education; (Cont.)

807/2508

2. Yaglom, I.M. The Equivalence of Ordinary Linear Differential Operators (M.K. Page) 236
3. Olan, D. Solution of the Bang Problem on the Covering of Convex Figures (I.M. Yaglom) 239

V. PROBLEMS

Edited by I. M. Yaglom

Problems

243

Solutions of problems

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VI. MATHEMATICAL LITERATURE

Ashkinuze, V.G. On Mathematics Texts for Secondary Schools in the German Democratic Republic 271

Zeskin, M.M. On the Collection of Geometric Problems of V.A. Zhurov 293

Card 7/8

ASHKINUZE, V.G.; LEVIN, V.I.; SEMUSHIN, A.D. (Moskva)

Rearranging mathematics curricula in connection with the new
tasks of secondary schools. Mat. v shkole no.1:40-51 JA-F
'59. (MIRA 12:1)

(Mathematics)

ISHIYAMA, Y.G. (r. Shinty)

Mathematics textbooks for secondary schools of the German Democratic
Republic. Mat. proc. no. 4: 571-592 '59. (DIA 12:11)
(Germany, East--Mathematics--Textbooks)

ASHKINUZE, V.G.; SEMUSHIN, A.D. (Moskva)

Draft of a program in mathematics for a three-year school. Mat v
shkole no.5:41-45 S-0 '60. (MIRA 13:10)
(Mathematics--Study and teaching)

ASHKINUZE, V.G. (Moskva); LEVIN, V.I. (Moskva); SEMUSHIN, A.D. (Moskva)

Some remarks on the draft of the program on mathematics for
secondary schools. Mat. pros. no.5:127-132 '60. (MIRA 13:12)
(Mathematics--Study and teaching)

YAGLOM, Isaak Moiseyevich; ASHKINUZE, Vladimir Georgiyevich;
GOL'DBERG, V.V., red.; KARPOVA, T.V., tekhn. red.

[Ideas and methods in affine and projective geometry]
Idei i metody affinnoi i proektnoi geometrii. Moskva,
Uchpedgiz. Pt.1.[Affine geometry]Affinnaia geometriia.
1962. 246 p. (MIRA 15:11)

(Geometry, Modern)

ASHKINUZE, V.G.; SHVARTSBURO, S.I. (Moskva)

Schools specializing in mathematics. Mat. v shkole no.2:81-83 Mr-Ap '63.

(MIRA 16:4)
(Mathematics—Study and teaching)

ASHKINUZE, V.G. (Moskva)

Studying quadratic equations and inequalities in the ninth grade
under the new curriculum. Mat. v shkole no.4:34-43 JI-Ag '63.
(MIRA 16:9)

(Mathematics--Study and teaching)

MARNYANSKIY, Izrail' Adol'fovich; ASUKINUZE, V.G., nauchn. red.;
SIDOROVA, L.A., red.

[Elements of mathematical analysis in a school mathematics
course; a textbook for teachers] Elementy matematicheskogo
analiza v shkol'nom kurse matematiki; posobie dlia uchite-
lei. Moskva, Prosveshchenie, 1964. 140 p.

(MIRA 18:4)

ASHKINURI, Z. K.

✓ The A. L. Malchenko and M. P. Chistyakova semicon-
tinuous scheme of alcohol production. Z. K. Ashkinuri
and B. D. Rabinovich. *Trudy Khim. Fizich. Vsesoyuzn.*
Nauch.-Issledovatel. Inst. Spirtovoi Prom. 1953, No. 1, 5-27;
Referat. Zhur., Khim. 1954, No. 60834.—Production tests
showed the advantages of this method over a periodic
method of alc. production. M. Horch

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ASHK 10021

Z.K.

Investigation of methods for continuous saccharification in the production of alcohol from starchy substances. Z. A. Raev, Z. K. Ashkinuzi, T. M. Drazhner, and K. K. Bazilevich. *Trudy Khim. Filiala Vsesoyuz Nauch.-Issledovatel. Inst. Spirt. Prom.* 1953, No. 1, 44-68; *Referat. Zhur., Khim.* 1955, No. 4895.—A comparative study was made between one- and two-step saccharification of sweet mash. The two-step process gave better results.

M. Hosei

Ashkinuzi, Z.K.

✓ Continuous cooking of starch-containing raw material for the purpose of size reduction. Z. I. Ashkinuzi, B. D. Rabinovich, A. P. Bereshtelskiy, and I. A. Chervak (All-Union Sci. Research Inst. Alcohol Ind., Kiev). *Spirtovoye Prom.* 23, No. 1, 4-10 (1968).—Equipment, like crushers, feeders, mixers, and filters, used for the prepn. of fermentation mashes from potatoes, rye, and wheat are illustrated. Values are given for the amts. of H₂O and the temps. at which these materials are treated, the vts. worked up/hr., and the yields of EtOH in correct runs. Werner Jacobson

Chem

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